Serial No.: 10/628,259 Filed: July 29, 2003

Page : 2 of 8

### Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

## Listing of claims:

## 1-14. (Cancelled)

- 15. (Currently amended) An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:
- (A) a metal ionic compound having catalytic function, which has a general formula M<sup>+a</sup> X<sup>-b</sup>, in which M is a metal element selected from the group consisting of Ni, Co, Mg, Mn, Cr, Ca, Fe, Cu, Ti, Al, Sb, Sn, Pb, Zn, Pt, Pd, Os, Ru, Cd, Rh, and Ir, or M is NH<sub>4</sub>; X is an anionic group selected from the group consisting of <u>fluoride</u>, <u>chloride</u>, <u>bromide</u>, <u>iodide</u>, <u>nitrate</u>, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, <u>percholate</u>, <u>gluconate</u>, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; a is an integer of from 1 to 6; and b is an integer of from 1 to 6;
- (B) is an ionic compound having a general formula NX, in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the group consisting of <u>fluoride</u>, <u>chloride</u>, <u>bromide</u>, <u>iodide</u>, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, <u>gluconate</u>, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; and
- (C) an additive having a general formula RY<sub>z</sub>, in which R is an element selected from the group consisting of Li, Na, K, Mg, and Ca, and Zn; Y is selected from the group consisting of chloride, nitrate, sulfate, carboxylate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; and z is one or two;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000, and a composition in which (A) is copper gluconate and magnesium sulfate, (B) is lithium chloride, and (C) is sodium bicarbonate is excluded.

Serial No.: 10/628,259 Filed: July 29, 2003

Page : 3 of 8

16. (Cancelled)

17. (Previously presented) A spray, aerosol, and a film comprising the anti-bacteria, anti-viral, and anti-fungus composition according to claim 15.

# 18. (Previously presented) A method comprising:

applying to a filter of an air-conditioner, a tap, a stool, an eleveator interior, or a keyboard in a household, a vehicle, a hospital, a school, a restaurant, a hotel, or an internet coffee shio, or applying to a human being the anti-bacteria, anti-viral, and anti-fungus composition according to claim 15.

#### 19-22. (cancelled)

- 23. (New) An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:
- (A) a metal ionic compound having catalytic function, which has a general formula M<sup>+a</sup> X<sup>-b</sup>, in which M is a metal element selected from the group consisting of Ni, Co, Mn, Cr, Ca, Fe, Cu, Ti, Al, Sb, Sn, Pb, Pt, Pd, Os, Ru, Cd, Rh, and Ir, or M is NH<sub>4</sub>; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; a is an integer of from 1 to 6; and b is an integer of from 1 to 6;
- (B) is an ionic compound having a general formula NX, in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, gluconate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; and
- (C) an additive having a general formula RY<sub>z</sub>, in which R is an element selected from the group consisting of Li, Na, K, Mg, Ca, and Zn; Y is selected from the group consisting of

Serial No. : 10/628,259
Filed : July 29, 2003

Page : 4 of 8

chloride, nitrate, sulfate, carboxylate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; and z is one or two;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000.

24. (New) An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:

- (A) a metal ionic compound having catalytic function, which has a general formula M<sup>+a</sup> X<sup>-b</sup>, in which M is a metal element selected from the group consisting of Ni, Co, Mg, Mn, Cr, Ca, Fe, Ti, Al, Sb, Sn, Pb, Pt, Pd, Os, Ru, Cd, Rh, and Ir, or M is NH<sub>4</sub>; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, gluconate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; a is an integer of from 1 to 6; and b is an integer of from 1 to 6;
- (B) is an ionic compound having a general formula NX, in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, gluconate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; and
- (C) an additive having a general formula RY<sub>z</sub>, in which R is an element selected from the group consisting of Li, Na, K, Mg, Ca, and Zn; Y is selected from the group consisting of chloride, nitrate, sulfate, carboxylate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; and z is one or two;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000.

- 25. (New) An anti-bacteria, anti-virus, and anti-fungus composition, which includes the following ingredients:
- (A) a metal ionic compound having catalytic function, which has a general formula M<sup>+a</sup> X<sup>-b</sup>, in which M is a metal element selected from the group consisting of Ni, Co, Mn, Cr, Ca, Fe, Ti, Al, Sb, Sn, Pb, Zn, Pt, Pd, Os, Ru, Cd, Rh, and Ir, or M is NH<sub>4</sub>; X is an anionic group selected from the group consisting of nitrate, sulfate, sulfate, acetate, oxalate, carboxylate,

Serial No. : 10/628,259
Filed : July 29, 2003

Page : 5 of 8

succinate, phosphate, pyrophosphate, percholate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; a is an integer of from 1 to 6; and b is an integer of from 1 to 6;

(B) is an ionic compound having a general formula NX, in which N is an element selected from the group consisting of Li, Na, and K; X is an anionic group selected from the group consisting of fluoride, chloride, bromide, iodide, nitrate, sulfate, sulfite, acetate, oxalate, carboxylate, succinate, phosphate, pyrophosphate, percholate, gluconate, ascorbate, ethylenediamine tetraacetate, furmate, and lactate; and

(C) an additive having a general formula RY<sub>z</sub>, in which R is an element selected from the group consisting of Li, Na, K, Mg, Ca, and Zn; Y is selected from the group consisting of chloride, nitrate, sulfate, carboxylate, carbonate, bicarbonate, phosphate, dihydrogen phosphate, hydrogen phosphate, and oxalate; and z is one or two;

wherein the weight ratio of ingredients (A):(B):(C) is 1:10-50:1500-3000.

- 26. (New) The composition according to claim 15, wherein ingredient (A) is nickel chloride, ferric chloride, ferric sulfate, ferrous chloride, ferrous sulfate, manganese chloride, or manganese sulfate.
- 27. (New) The composition according to claim 26, wherein ingredient (B) is ethylenediaminetetraacetic acid dilithium salt, ethylenediaminetetraacetic acid dipotassium salt, ethylenediaminetetraacetic acid disodium salt, lithium ascorbate, lithium lactate, potassium ascorbate, potassium lactate, sodium ascorbate, or sodium lactate.
- 28. (New) The composition according to claim 27, wherein ingredient (C) is calcium carbonate, lithium carbonate, magnesium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, magnesium chloride, Sodium chloride, potassium phosphate, potassium hydrogen phosphate, potassium dihydrogen phosphate, calcium sulfate, lithium sulfate, or magnesium sulfate.

Serial No.: 10/628,259 Filed: July 29, 2003

Page : 6 of 8

29. (New) The composition according to claim 23, wherein ingredient (A) is nickel chloride, copper chloride, copper sulfate, cuprous chloride, cuprous sulfate, ferric chloride, ferric sulfate, ferrous chloride, ferrous sulfate, manganese chloride, or manganese sulfate.

- 30. (New) The composition according to claim 29, wherein ingredient (B) is ethylenediaminetetraacetic acid dilithium salt, ethylenediaminetetraacetic acid dipotassium salt, ethylenediaminetetraacetic acid disodium salt, lithium ascorbate, lithium lactate, potassium ascorbate, potassium lactate, sodium ascorbate, or sodium lactate.
- 31. (New) The composition according to claim 30, wherein ingredient (C) is calcium carbonate, lithium carbonate, magnesium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, magnesium chloride, Sodium chloride, potassium phosphate, potassium hydrogen phosphate, potassium dihydrogen phosphate, calcium sulfate, lithium sulfate, or magnesium sulfate.
- 32. (New) The composition according to claim 24, wherein ingredient (A) is nickel chloride, ferric sulfate, ferrous chloride, ferrous sulfate, or manganese chloride.
- 33. (New) The composition according to claim 32, wherein ingredient (B) is ethylenediaminetetraacetic acid dilithium salt, ethylenediaminetetraacetic acid dipotassium salt, ethylenediaminetetraacetic acid disodium salt, lithium ascorbate, lithium lactate, potassium ascorbate, potassium lactate, sodium ascorbate, or sodium lactate.
- 34. (New) The composition according to claim 33, wherein ingredient (C) is calcium carbonate, lithium carbonate, magnesium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, magnesium chloride, Sodium chloride, potassium phosphate, potassium hydrogen phosphate, potassium dihydrogen phosphate, calcium sulfate, lithium sulfate, or magnesium sulfate.

Serial No. : 10/628,259
Filed : July 29, 2003

Page : 7 of 8

35. (New) The composition according to claim 25, wherein ingredient (A) is nickel sulfate, ferric sulfate, ferrous sulfate, manganese sulfate, or chromium sulfate.

- 36. (New) The composition according to claim 35, wherein ingredient (B) is ethylenediaminetetraacetic acid dilithium salt, ethylenediaminetetraacetic acid dipotassium salt, ethylenediaminetetraacetic acid disodium salt, lithium ascorbate, lithium lactate, potassium ascorbate, potassium lactate, sodium ascorbate, or sodium lactate.
- 37. (New) The composition according to claim 36, wherein ingredient (C) is calcium carbonate, lithium carbonate, magnesium carbonate, potassium carbonate, sodium bicarbonate, potassium bicarbonate, magnesium chloride, Sodium chloride, potassium phosphate, potassium hydrogen phosphate, potassium dihydrogen phosphate, calcium sulfate, lithium sulfate, or magnesium sulfate.